

Cross Contamination in Commercial Facilities



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Cross contamination has always been a key concern for medical facilities and for the food service industry. As a result of the threat of pandemics such as H1N1 or swine flu as well as the increase in incidences of respiratory illnesses and allergies, custodians must now also take cross contamination very seriously.

1. Impact of a flu epidemic

The recent outbreak of the H1N1 virus, began in Mexico a few weeks ago. Now, more than 73 people have died from the virus worldwide. The 24/7 news cycle, along with the echo-chamber of the Internet, have dramatically amplified fears.

Widespread illness and fears of a global pandemic will likely also have a financial cost. The World Bank estimated in 2008 that a flu pandemic could cost US\$3-trillion and result in a nearly 5% drop in world gross domestic product, damaging prospects of recovery in a world economy deep in financial crisis. According to the Financial Post¹, an outbreak of swine flu dampens tentative hopes for the global economy, sending markets lower and analysts fear a possible pandemic could force countries further into recession.

Many of us are all too familiar with the human and financial cost of an epidemic - the SARS outbreak, which disrupted travel, trade and the workplace in 2003, cost the Asia Pacific region an estimated US\$40-billion. It lasted six months and killed 775 of the 8,000 people it infected in 25 countries. It also weighed heavily on the Canadian economy.

2. How Cross Contamination Occurs and Preventing the Spread of Infectious Diseases.

There are many steps that you can take in order to prevent the spread of infectious diseases. Whether a deadly influenza or the common cold, these diseases are easily transmitted from one person to another through sneezing, coughing, and hand-to-hand contact. Many viruses survive for several hours on hard surfaces. Therefore, viruses are passed on by picking up an object, turning a door handle, or answering a phone.

It is important to understand that germs hide on every surface. In public buildings, two of the main germ 'hotspots' - bathrooms and sinks - usually get a thorough and frequent cleaning. By contrast, phones, desks and computer keyboards are not generally cleaned on a regular basis and therefore may harbor viruses. The floor, desktops and countertops are also major sources of contamination - germs released into the air eventually land on the largest horizontal surface in the room.

The idea that floors house the bulk of a facility's bacteria flies in the face of common cleaning practices where crews work from the top down, cleaning surfaces above the floor first. Custodians' feet can pick up germs and transport them everywhere. Also, preventing custodians from cleaning cluttered desktops allow a large germ reservoir to remain untouched. Without a thorough cleaning of these key surfaces, it is impossible to shut down a microbial spread. When risk exists, building occupants should be advised to clear their desks to allow custodians to clean. Experts recommend that this practice continue until the threat of an outbreak is gone. Cleaning should remove many of the germs living on these surfaces, but the ones left behind will soon begin to grow and to re-accumulate. Therefore, to be safe, also use a disinfectant product to kill the bacteria and viruses that are present. In order to remove all disease causing organisms, including spores, an additional sterilization process would be required. Proper disinfection requires dwell time on an already cleaned surface. One must follow the use directions on the label of the disinfectant to understand the appropriate dwell time. Surfaces must first be cleaned properly and then disinfected if we want to achieve our goal of killing bacteria and viruses from these critical touch points.

¹ <http://www.financialpost.com/story.html?id=1538050>

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Another common mistake is to clean multiple areas with the same supplies and/or equipment and to store restroom cleaning supplies together with items used in other areas. Therefore, it is best to store like items together and separate them from items used for other purposes. Keep all cleaning tools and equipment clean and sanitized. Cloths, sponges and mops are sources of concentrated bacteria that can cross-contaminate anything with which they come into contact. Changing of mops, cleaning solutions, and cleaning cloths frequently and especially after cleaning each restroom is important. Switching to microfiber mops and cleaning clothes which are more absorbent than string mops or terrycloth towels will also help.

Properly training and educating your cleaning staff on how to effectively clean and encouraging them to wear gloves and goggles, which are changed regularly will show that you care about their health and safety.

Also important, use tools and processes that are color-coded according to the cleaning job. This way, workers can see at a glance which products should be used for floors vs. countertops, so that such areas are protected from cross-contamination. Illustrations such as pictograms and wall charts can also be very effective. Encourage the use of a "no-touch/hands-free" system where possible such as a soap dispenser, toilet flush, hand dryer, and automatic door opener. A hands free system offers additional benefits because it minimizes direct contact and further reduces the spread of germs.

Added services can be provided by implementing a training and communication program. Communicate to building employees that you have implemented a healthy cleaning plan for their protection. Ask that they also follow procedures to help prevent cross-contamination. For example, you can post visual signage about proper hand washing. Antibacterial hand sanitizer dispensers stationed in key traffic areas in the building provide another reminder for people to clean their hands. Take into account the many things people do and touch with their hands in a day. **People tend to forget that proper hand washing is the single most important measure for preventing the spread of germs, viruses and infection.** Physical removal of contaminants by washing with soap and water is a very effective means of infection control. Failure to wash your hands thoroughly and the proper length of time is one of the major problems of infection control. Hand sanitizers are useful alternatives if soap and water are not available (for example, when traveling in the car or taxi on the way to a business meeting or before eating an in-flight meal or snack).

Below are some helpful hand washing tips:

i. When to wash hands:

- After sneezing, coughing, and blowing your nose.
- After using the restroom
- Before and after staff meetings if food is served
- After scanning newspapers or magazines in the break room
- Before and after eating
- After using someone else's keyboard or tools
- Before and after a meet and greet activity
- When using shared office equipment such faxes, phones, photocopiers

ii. How to wash your hands:

1. Wet hands with warm running water prior to reaching for soap, either in bar or liquid form.
2. Rub hands together to make a lather. Do this away from running water, so the lather isn't washed away.
3. Wash the front and back of hands, between fingers and under nails. Continue washing for 15 seconds or more.
4. Rinse hands well under warm running water.
5. Dry hands thoroughly with a clean towel or air dryer.

These simple actions will go a long way in protecting the health and safety of your employees and customers.

Educating your building occupants about the importance of hand washing and having a proper cleaning program can make a tremendous impact. Most tend to focus on the appearance of a clean building, as well as the time and cost involved for cleaning services rather than explaining the prevention and public health aspect of a good cleaning program. Clients will appreciate your extra care and concern, which will go a long way in establishing



- Areas most frequently missed during hand washing
- Less frequently missed
- Not missed

(Adapted from Taylor L (1978), An evaluation of hand washing techniques - I, Nursing Times, 12 January, pp 54-55)



your reputation and solidifying a long-term relationship. In addition to the many benefits provided by a responsible cleaning program, green cleaning offers added advantages in terms of protecting public health.

3. Indoor Air Quality (IAQ) explained

Indoor Air Quality (IAQ) has become an important occupational health and safety issue. Recent studies show that the air inside homes and commercial buildings can be 2 to 10 times more polluted than outside air². Considering the amount of time that employees and occupants spend in your buildings, it is important to assess IAQ and ways in which it can be improved.

The World Health Organization estimates that as many as 1 out of every 3 workers may become sick from his workplace. For example, work-related asthma is a common respiratory disease resulting caused by dust, mould, fumes and chemicals. Asthma can develop slowly, over many months or years or even in a matter of a few days. People who already have asthma can find that being at work makes their symptoms worse. Overall, doctors estimate that 25% of working adults have asthma symptoms that are caused or worsened at work. Furthermore, between 10-15 % of new asthma cases in adults are thought to be work-related.

Conventional cleaning products are a common contributor to respiratory illnesses. It is therefore necessary to choose products which are formulated to reduce exposure to harmful gases and toxic solvents. In addition to reducing potential asthma attacks, reducing janitorial complaints and staff absenteeism, this decision will generally help to significantly better IAQ in your buildings.

4. Help your clients improve their bottom line

In 2007, full-time working Canadians took an average of 9.9 sick days, a full day more than just four years earlier³, resulting in more than 169 million missed days of work. Infectious diseases, such as colds and the flu, are the leading cause of employee absenteeism due to illness. Lost productivity in the workplace from the flu alone costs employers an estimated \$15 billion. The impact of this increasingly absent workforce could take a heavy toll on the already weakened economy with billions of dollars at stake due to decreased productivity.

Your clients may think that the only way that you can save them money is to offer your services for less money. In fact, an effective green cleaning program which reduces the potential for cross contamination will boost these companies' productivity in dollars and also reduces potential liabilities. A cleaner work space equals higher morale and lower absentee rates, not to mention a healthier working environment for your employees, building occupants, and visitors.

5. Implement a safe and effective green cleaning program

Amid growing health and safety concerns, as well as awareness about long-term damage to the environment, it is important to understand the innumerable advantages that green cleaning provides. By carefully choosing environmentally sound cleaning chemicals, cleaning methods and cleaning equipment, businesses can realize significant productivity gains and increase IAQ. ***An effective green cleaning program should safeguard the health and productivity of employees by providing the highest international and domestic standards for health and safety and reducing any risk of cross contamination.*** Look for a company willing to provide the necessary training and education to ensure the highest level of product usage safety for you and your customers.

² Examining the Relationship between Conventional Cleaning Chemicals and Human Health (and Environmental) Risks – A technical white paper – TerraChoice Environmental Marketing for Avmor Ltd. Copyright 2008.

³ (source: http://finance.alphatrade.com/story/2009-02-10/CNW/200902101046CANADANWCANADAPR_C7137.html)
source: <http://www40.statcan.gc.ca/l01/cst01/health47c-eng.htm>)



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